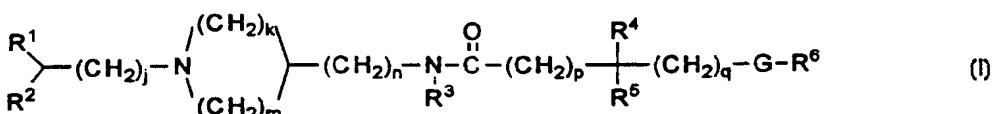




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(63) Related by Continuation (CON) or Continuation-in-Part (CIP) to Earlier Applications			(74) Agents: BIGGART, Waddell, A. et al.; Sughrue, Mion, Zinn, MacPeak & Seas, PLLC, Suite 800, 2100 Pennsylvania Avenue, N.W., Washington, DC 20037-3202 (US).
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(71) Applicants (for all designated States except US): TEIJIN LIMITED [JP/JP]; 6-7, Minamihommachi 1-chome, Chuo-ku, Osaka-shi, Osaka 541-0054 (JP). COMBICHEM, INC. [US/US]; 9050 Camino Santa Fe, San Diego, CA 92121 (US).			(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).
(72) Inventors; and			
(75) Inventors/Applicants (for US only): SHIOTA, Tatsuki [JP/JP]; Teijin Limited, Tokyo Research Center, 4-3-2, Asahigaoka, Hino-shi, Tokyo 191 (JP). KATAOKA, Ken-ichiro [JP/JP]; Teijin Limited, Tokyo Research Center, 4-3-2, Asahigaoka, Hino-shi, Tokyo 191 (JP). IMAI, Minoru [JP/JP]; Teijin Limited, Tokyo Research Center, 4-3-2, Asahigaoka, Hino-shi, Tokyo 191 (JP). TSUTSUMI, Takaharu [JP/JP]; Teijin Limited, Tokyo Research Center, 4-3-2, Asahigaoka, Hino-shi, Tokyo 191 (JP). SUDOH, Masaki [JP/JP]; Teijin Limited, Tokyo Research Center, 4-3-2, Asahigaoka, Hino-shi, Tokyo 191 (JP). SOGAWA, Ryo [JP/JP]; Teijin Limited, Tokyo Research Center, 4-3-2, Asahigaoka, Hino-shi, Tokyo 191 (JP). MORITA, Takuya [JP/JP]; Teijin Limited, Tokyo Research Center, 4-3-2, Asahigaoka, Hino-shi, Tokyo 191 (JP). HADA, Takahiko [JP/JP]; Teijin Limited, Tokyo Research Center, 4-3-2, Asahigaoka, Hino-shi, Tokyo 191 (JP). MUROGA, Yumiko [JP/JP]; Teijin Limited, Tokyo Research Center, 4-3-2, Asahigaoka, Hino-shi, Tokyo 191 (JP). TAKENOUCHI, Osami [JP/JP]; Teijin Limited, Tokyo Research Center, 4-3-2, Asahigaoka,			
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(57) Abstract

A compound represented by general formula (I), a pharmaceutically acceptable acid addition salt thereof or a pharmaceutically acceptable C₁-C₆ alkyl addition salt thereof, and their medical applications. Since these compounds inhibit the action of chemokines such as MIP-1 α and/or MCP-1 on target cells, they may be useful as a therapeutic drug and/or preventative drug in diseases, such as atherosclerosis, rheumatoid arthritis, and the like where blood monocytes and lymphocytes infiltrate into tissues.

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ring, and the phenyl group, C₃-C₈ cycloalkyl group, C₃-C₈ cycloalkenyl group, benzyl group, aromatic heterocyclic group, or condensed ring may be substituted with one or more of a halogen atom, a hydroxy group, a mercapto group, a cyano group, a nitro group, a thiocyanato group, a carboxy group, a carbamoyl group, a trifluoromethyl group, a C₁-C₆ alkyl group, a C₃-C₆ cycloalkyl group, a C₂-C₆ alkenyl group, a C₁-C₆ alkoxy group, a C₃-C₈ cycloalkyloxy group, a C₁-C₆ alkylthio group, a C₁-C₃ alkyleneedioxy group, a phenyl group, a phenoxy group, a phenylamino group, a benzyl group, a benzoyl group, a phenylsulfinyl group, a phenylsulfonyl group, a 3-phenylureido group, a C₂-C₇ alkanoyl group, a C₂-C₇ alkoxy carbonyl group, a C₂-C₇ alkanoyloxy group, a C₂-C₇ alkanoylamino group, a C₂-C₇ N-alkylcarbamoyl group, a C₁-C₆ alkylsulfonyl group, a phenylcarbamoyl group, a N,N-di (C₁-C₆ alkyl) sulfamoyl group, an amino group, a mono (C₁-C₆ alkyl) amino group, a di (C₁-C₆ alkyl) amino group, a benzylamino group, a C₂-C₇ (alkoxycarbonyl) amino group, a C₁-C₆ (alkylsulfonyl) amino group, or a bis (C₁-C₆ alkylsulfonyl) amino group, wherein the substituent for the phenyl group, C₃-C₈ cycloalkyl group, C₃-C₈ cycloalkenyl group, benzyl group, aromatic heterocyclic group, or condensed ring is optionally substituted with one or more of a halogen atom, a cyano group, a hydroxy group, an amino group, a trifluoromethyl group, a C₁-C₆ alkyl group, a C₁-C₆ alkoxy group, a C₁-C₆ alkylthio group, a mono (C₁-C₆ alkyl) amino group, or a di (C₁-C₆ alkyl) amino group, with the proviso that when k = 2, m = 2, n = 0, and the phenyl group in R¹ is not substituted, C₁-C₆ alkyl group as a substituent for the phenyl group, C₃-C₈ cycloalkyl group, C₃-C₈ cycloalkenyl group, benzyl group, aromatic heterocyclic group, or condensed ring in R⁶ is not substituted with an amino group and R⁶ is not a benzyl group.

2. A compound, its pharmaceutically acceptable acid addition salt or its pharmaceutically acceptable C₁-C₆ alkyl addition salt as set forth in claim 1, wherein k = 1 and m = 2 in the above formula (I).

3. A compound, its pharmaceutically acceptable acid addition salt or its pharmaceutically acceptable C₁-C₆ alkyl addition salt as set forth in claim 2, wherein n = 0 in the above formula (I).

4. A compound, its pharmaceutically acceptable acid addition salt or its pharmaceutically acceptable C₁-C₆ alkyl addition salt as set forth in claim 1, wherein k = 0, m = 3 and n = 1 in the above formula (I).
5. A compound, its pharmaceutically acceptable acid addition salt or its pharmaceutically acceptable C₁-C₆ alkyl addition salt as set forth in claim 1, wherein k = 1 and m = 3 in the above formula (I).